PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Yoseph KOLTUNOV, Alexander MAXIMOV, Igor MEITIN, Motti ALLON, Glen GUTTMAN and Arik KERSHENBAUM

Attn: PCT Branch

Application No. U.S. National Stage of PCT/IL98/00568

Filed: May 4, 2000 Docket No.: 106153

For: DETECTION AND RECOGNITION OF OBJECTS BY MULTISPECTRAL SENSING

TRANSLATION OF THE ANNEXES TO THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Attached hereto is a translation of the annexes to the International Preliminary Examination Report (Form PCT/IPEA/409). The attached translated material replaces the First page of the Specification and all the claims.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

JAO:TJP/crt

Thomas J. Pardini
Registration No. 30,411

Date: May 4, 2000

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
Please grant any extension necessary for entry;
Charge any fee due to our Deposit Account No. 15-0461

Determination of temperature and/or emissivity function of objects by remote sensing

FIELD OF THE INVENTION

The present invention relates to a method and a system for remotely determining temperature and emissivity parameters of objects by multispectral measurements.

BACKGROUND OF THE INVENTION

Various approaches have been used, for example, for passive remote sensing of the ground. Thus, maps of surface brightness, temperature and emissivity have been used for investigating geological surface properties (Kahle et al, 1980, Applied Optics, 19, 2279), whereas maps of thermal inertia have been used to infer subsurface properties of soil (Price, 1977, Journal of Geophysical Research, 82, 2582).

The detection of underground structures requires penetration of the ground and is therefore accomplished by active sensing techniques, such as radar (Blake, 1993, "Ground-Penetration Radar Developed by Sweden", International Defense Review, 3, 193; von Maydell et al, 1987, U.S. Patent 4.675,677), or combined passive sensing and radar (Clark et al, SPIE - The International Society for Optical Engineering, 1942, 178).

It is acknowledged in the prior art, that emissivity of various